NOTES ON THE REPORT OF THE PROFESSIONAL FATE OF THE MECHANICAL DEPARTMENT GRADUATES OF THE MARITIME ACADEMY IN SZCZECIN

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ABSTRACT

In Poland there is a Higher Education Act introduced in October 2011, which imposes an obligation to monitor the careers of graduates. Career Office Maritime Academy in Szczecin conducted a first pilot research, which aimed to prepare the mandatory tests and tame the graduates for a new trial, which are cyclic test of careers of graduates: Navigation, Mechanical and Transport Engineering and Economics. The first research was conducted among graduates who have passed engineer or master exam by the end of 2012. The paper presents the methodology of the research careers of graduates of the Maritime Academy in Szczecin in 2016. The paper presents research tools and research results. Career situation of the graduates of the Mechanical Department is characterized. Sectors of the economy and positions on which graduates found employment after graduation are presented. The paper shows assessment of the skills acquired during the studies at the Maritime Academy of Szczecin by the graduates in their professional work. The paper also provides a subjective evaluation of the studies by the respondents.

Keywords: graduate, professional research of careers of graduates

INTRODUCTION

The main purpose of the study regarding the fate of professional graduates was to get acquainted with the professional situation of graduates of the Maritime University of Szczecin in the period up to 12 months from the completion of studies and the determination of both educational and professional plans of these graduates [1].

In this period, the results of education and discrepancies between imaginations and the realities of the labor market are particularly evident. In the area of interest, there was a desire to get an answer to the question of how university students cope in the labor mar-ket, as well as present a profile of a graduate from the Faculty of Mechanical Engi-neering in the context of spatial and professional mobility, financial aspirations, etc.

The research was supposed to be a tool to verify the following issues [2]:

1. Undertaking extraordinary educational and professional activity
2. Type of the first work undertaken by graduates, ways of its getting and difficulties related to this process
3. Determination of ways related to the looking for a job
4. Previous professional experience

5. Further educational plans
6. Determining the professional potential of respondents
7. Evaluation of the completed field of study
8. Evaluation of acquired education and qualifications in relation to the labor market
9. Identification of industries, in which graduates undertake employment
10. Reasons of the professional inactivity of graduates

The report presents the results of examination concerning the professional fate of graduates of the Faculty of Mechanical Engineering, who completed their studies in the period from January to December 2016 [2]. It includes persons, who graduated from the Faculty of Mechanical Engineering.

People from the same population will be tested after 3 and 5 years after completing the engineering or master's exam. This report presents the results of the first stage of the study.

A quantitative method based on the CAWI (Computer Assisted Web Interview) was used. In this technique, the research tool is a questionnaire available in on-line format. Answers provided in electronic form are automatically saved in the database, so the time of data processing analysis is shortened. The advantage of conducting researches with the use of the CAWI technique is quick access to all respondents through IT tools that currently constitute a dominant medium of social communication and give a sense of greater anonymity of respondents.

Due to the need to meet the requirements of the Act of 29 August 1997 on the protection of personal data, only persons, who completed the form and agreed to the collection, use and processing of their persons data by the Maritime University of Szczecin, took part in the research. Each graduate had the right to refuse to disclose his personal data by failure to consent to its processing.

In the study, the selection of a sample was random and it was generally based on self-recruitment. This type of sampling method has some limitations in the possibility of deducting from the sample the results for the entire population. However, taking into account the tool (on-line survey), it ensures greater efficiency in terms of the level of the sample's implementation.

Two separate surveys for graduates of engineering and master's studies were created. Over 50 questions were prepared for each of these groups, most of which were closed questions. Moreover, the survey included semi-open questions that gave the opportunity to supplement and formulate own answers. According to the recommendations of the Institute of Educational Researches, universities should monitor the educational and professional carriers of graduates based on facts. They should also combine facts with opinions. The survey referred to scale questions – they allowed the assessment of skills and qualifications in a five-point scale, where 1 was the lowest score and 5 was the highest mark.

RESEARCH PROCESS

STAGE I – obtaining a permission to participate in surveys related to the Professional Fate of Graduates of the Maritime University of Szczecin and process of personal data for research purposes.

STAGE II – sending questionnaires to persons, who agreed to participate in the study within up to 12 months from the defense of their engineering/master's thesis. The study was conducted with the use of the CAWI method.

STAGE III – sending several reminders with a request to complete the questionnaire at 14-day intervals.

STAGE V – development of collected data.

STAGE VI – preparation of a research report.

33 graduates out of 71 graduates of the Faculty of Mechanical Engineering (with defended engineering thesis in 2015), who agreed to participate in the study and received a link with a request to complete the survey, took part in the study. Therefore, the feedback level of the questionnaire was 46.5%. Some graduates did not agree to participate in the study. Moreover, the feedback rate of surveys was limited as the result of entering invalid or incorrect e-mail addresses into the form. The report does not include a description of graduates (Faculty of Mechanical Engineering), master's studies, due to the limited population in the sample and the population itself. Thanks to this solution, it is not possible to connect the values of indicators with persons covered by the study. For the same reason, the answers of a small group of inactive respondents were not taken into account.

The group of respondents from the Faculty of Mechanical Engineering was almost entirely represented by men – 31 persons (94%). Two persons (6%) of the respondents are women.

Table 1. Industries – graduate of first-degree studies [2]

In which industry are you working?	Number of answers	%
Building	1	4
Maritime ecomocy	15	58
Light industry	1	4
Heavy industry	1	4
Agriculture	1	4
Transport and Logistics	5	19
Geodesy / Engineering	1	4
Services	1	4

69% of respondents from the Faculty of Mechanical Engineering, before the beginning of the first-degree studies, were residents of the West Pomeranian Voivodeship, including 18% of them lived in Szczecin (Table 2).

Table 2. Place of residence before the beginning of the first-degree studies [2]

Place of residence before the beginning of the first-degree studies	Number of answers	%
Szczecin	6	18
West Pomeranian Voivodeship – other city	12	36
West Pomeranian Voivodeship – village	5	15
Other voivodeship – voivodeship city	3	9
Other voivodeship – other city	4	12
Other voivodeship – village	2	6
Abroad	1	3

After completing engineering studies, there was an increase in people living in Szczecin. Staying in Szczecin is connected with the continuation of second-degree studies and taking in this city a paid job (Table 3 and 4).

Table 3. Current place of residence [2]

Current place of residence	Number of answers	%
Szczecin	16	48
West Pomeranian Voivodeship – other city	6	18
West Pomeranian Voivodeship – village	4	12
Other voivodeship – voivodeship city	4	12
Other voivodeship – other city	3	9

Table 4. Plans for continuing education of graduates from the Faculty of Mechanical Engineering [2]

Do you continue or plan to continue your education?	Number of answers	%
I am continuing the same field of study at the Maritime University of Szczecin	4	12
I am continuing a different field of study at the Maritime University of Szczecin	2	6
I am continuing my master's studies at another University. Where?	3	9
I am continuing my postgraduate studies	0	0
I am continuing by participating in courses and trainings	3	9
I am planning to continue my master's studies	11	33
I am planning to continue my postgraduate studies	1	3
I am not continuing and I am not planning	13	39
Other options	0	0

Percentages in the last column do not add up to 100, due to the possibility of choosing more than one answer.

Respondents from the Faculty of Mechanical Engineering (WM) and the Faculty of Navigation (WN) plan to continue their studies in master's studies to a similar degree. More often than graduates from the Faculty of Engineering and Economical Transport (WIET) they do not continue and do not plan further education (Table 5).

Table 5. Continuation of education divided into faculties in accordance with the number of respondents [2]

Do you continue or plan to continue your education?	WN [%]	WM [%]	WIET [%]
I am continuing the same field of studies at the Maritime University of Szczecin	8	12	20
I am continuing a different field of studies at the Maritime University of Szczecin	3	6	16
I am continuing my master's studies at another University. Where?	11	9	9
I am continuing my postgraduate studies	2	0	0
I am continuing by participating in courses and trainings	14	9	6
I am planning to continue my master's studies	31	33	17
I am planning to continue my postgraduate studies	8	3	6
I am not continuing and I am not planning	34	39	26
Other options	5	0	6

Percentages in the last column do not add up to 100, due to the possibility of choosing more than one answer.

STUDENT AND PROFESSIONAL ACTIVITY DURING STUDIES

Students should be aware of how, apart from acquiring knowledge and passing exams, important is any additional activity that increases their chances on the labor market. For employers, the proverbial "paper" does not count, and the key value is a broadly understood activity undertaken during the studies. Behaviors that increase the chances of self-development and deepening of career capital elements include practices, internships, volunteering, membership in scientific circles, student organizations and all non-governmental organizations, foundations, trips to foreign exchanges – student exchanges, workshops, courses and trainings. Each of the above-mentioned activities carried out during studies gives students an advantage in competing for attractive work.

The following results (Table 6) are not a good forecast, especially if the expectations of current graduates are taken into account. 36% of respondents from

the Faculty of Mechanical Engineering did not undertake any of the above-mentioned forms of professional and educational activities. 42% of respondents took part in the trainings, and extra-vocational trainings were realized by 39% of them. The University's offer fives the opportunity to participate in student organizations and scientific circles. 12% of the respondents took advantage of this chance.

Table 6. Student and professional activity during studies [2]

Did you participate in the following activities during the studies?	Number of answers	%	% by the number of respondents
Erasmus+ student exchange programs	0	0	0
Trainings	14	27	42
Extracurricular practices	13	25	39
Internships	3	6	9
Student / local government organizations	4	8	12
Competitions	3	6	9
Volunteering	3	6	9
I did not take additional activity	12	23	36

Percentages in the last column do not add up to 100, due to the possibility of choosing more than one answer.

Taking into consideration the diversity in terms of departments, the smallest activity is observed among WIET graduates. Graduates of the Faculty of Mechanical Engineering most often took part in trainings and extracurricular practices.

Table 7. Student and professional activity during studies [2]

Did you participate in the following activities during the studies?	WM	WM [%]	WIET	WIET [%]	WN	WN [%]
Erasmus+ student exchange programs	0	0	1	1	6	5
Trainings	14	42	12	15	38	29
Extracurricular practices	13	39	6	7	36	27
Internships	3	9	13	16	10	8
Student/local government organizations	4	12	5	6	17	13
Competitions	3	9	0	0	11	8
Volunteering	3	9	5	6	9	7
I did not take additional activity	12	36	57	70	59	45

Percentages in the last column do not add up to 100, due to the possibility of choosing more than one answer.

WORK DURING STUDIES

Nowadays, the conviction that work during the period of education makes it much easier to obtain permanent employment after its completion is becoming more and more common. In order to get a good job, it is not enough to have a diploma. There are also other elements, the most important of which is the opportunity to present the professional experience. A candidate for a job, who was already professionally active, is more attractive in the eyes of the employer.

Graduates of the Maritime University of Szczecin (58%) can boast of professional activity during their studies. For 68% of them, it was a work consistent with the chosen field of study, mainly in Poland (36.8%). 31.6% of respondents were employed abroad (Table 8, 9 and 10).

Table 8. Work during studies [2]

Did you work during your studies?	Number of answers	%
Yes	19	58
No	14	42

Table 9. Relationship between professional work and completed field of study [2]

Was this work related to your field of study?	Number of answers	% by the number of respondents
Yes	13	68
No	6	32

Table 10. Place of work [2]

Place of work:	Number of answers	%
In Poland	7	36.8
Outside Poland	6	31.6
In Poland and abroad	6	31.6

A thoughtful choice of the field of study is an important contribution to the development of professional career. This is an issue pertaining to the question, in which graduates were to verify the selection of the field of study. This is an image of a situation, in which they can again decide on the selection of a university. It was interesting to find out whether the respondents would make the same choice. This could be a sign of satisfaction with the decision taken a few years ago. This

particularly confirms the decision to choose a university and a field of study at the same time.

In the case of the possibility of re-selecting the first-degree program, respondents from the Faculty of Mechanical Engineering, in 85% would choose the Maritime University as a university, of which only one person would select another field of study [2]. 15% of respondents would study at a completely different university [2].

CONCLUSION

Employers in Poland are not fully satisfied with the competencies of employees. Over half of them complain that graduates do not have skills [3], [4]. Specialist knowledge and knowledge of foreign languages are appreciated at the same level as soft competences, such as communicativeness, ability to work in a group or resistance to stress. Companies also expect from their potential employees specific features of character such as: responsibility and regularity, the ability to solve problems independently, communicativeness and self-control [5].

An independent research center, commissioned by Randstad, asked the respondents about the factors, which cause that companies are perceive by them as attractive places for work. According to the group of respondents, remuneration and additional benefits for employees have the greatest impact on the attractiveness of the employer. Such an answer was expressed by more than ¾ respondents. The respondents also indicated stable employment (57%) and a pleasant working atmosphere (52%). The most important factors indicated by the respondents included: professional development (44%) and the above-mentioned stability (32%). Every fourth person values employers, who offer training to employees, flexible forms of employment and a convenient location of the workplace. Very good reputation is important for 21% of participants in the study.

The answers of graduates of the Maritime University (engineering study) are similar to those from the nationwide study. Respondents considered as particularly important [2]: remuneration (77% of respondents), possibility of promotion (58%), professional satisfaction (38%), professional stabilization (35%).

In open questions, graduates of the Faculty of Mechanical Engineering pointed to the need to increase the hours of practical classes. According to the respondents, the study curriculum should be supplemented with subjects that enable them to acquire practical knowledge and the ability to use theoretical knowledge in practice. Additionally, the knowledge passed to graduates should be as up-to-date as possible.

The main determinant of changing work over the next 3 years was the desire to achieve higher earnings, as well as the need for new challenges and personal development.

33% of respondents from the Faculty of Mechanical Engineering are just planning to continue their second-degree studies. 39% of respondents do not want to undertake further education.

58% of the respondents worked professionally during their studies. This job was most often associated with the field of study, in Poland and on the basis of a contract.

The examined respondents from the Faculty of Mechanical Engineering were mostly satisfied with completed studies at the Maritime University of Szczecin, because in the case of possibility of re-selection the studies, they would choose their own university in 85%.

Graduates from the Faculty of Mechanical Engineering assessed (on a high and very high level) the competences related to the use of the computer and the Internet, as well as effective teamwork. Moreover, they highly evaluated their ability to work under pressure and under stress conditions, as well as their analytical skills.

82% of graduates of the Faculty of Mechanical Engineering are professionally active. 61.5% of them are employed on the basis of a seafarer contract of employment. The contract at sea as a working time was indicated by 58% of respondents. For 69% of respondents, this is work consistent with their education. Graduates of the Faculty of Mechanical Engineering (first-degree studies) mainly work in large companies (62%). In 65%, this work is performed abroad. The period of looking for a job between 2-6 months was characteristic for 38% of respondents. Knowledge and skills acquired while studying in the university are useful in the current work. When looking for a job, respondents (first-degree studies) most often reached for the medium of the Internet (73%). Subsequently, the respondents took advantage of personal contacts, mainly friends (42%) and employment agencies (38%).

When selecting an employer, they are mainly guided by: remuneration (77%), promotion opportunities (58%) and professional satisfaction (38%).

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